

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE
(REV. 7-80) PATENT AND TRADEMARK OFFICE**LIST OF PRIOR ART
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(Use several sheets if necessary)

Atty. Docket No. (Optional)

13164A

Application Number

10/090,887

Applicant(s)

Benjamin E. Reubinoff, et al.

Filing Date

March 5, 2002

Group Art Unit

1636

1632

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL* | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE (if appropriate) |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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| 94 | | Bongso, A., et al. (1994) "The Growth of Inner Cell Mass Cells From Human Blastocysts", <u>Meriogenology</u> 41:167 (Abstract XP000613214) |
| 7 | | Pera, M. F., et al. (1999) "Human Embryonic Stem Cells", <u>Journal of Cell Science</u> 113:5-10 |
| | | Reubinoff, B. E., et al. (2000) "Embryonic stem cell lines from human blastocysts: somatic differentiation in vitro", <u>Nature Biotechnology</u> 18:399-404 |
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EXAMINER

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7/28/04

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| Form PTO-1449 (REV. 7-80) | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | Atty. Docket No. 13164A | Serial No. To Be Assigned 10/090,887 |
| LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary) | | Applicant Benjamin Reubinoff, et al. | |
| | | Filing Date Herewith 3/5/02 | Group Unassigned 1632 |

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U.S. PATENT DOCUMENTS

| EXAMINER INITIAL* | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE (if appropriate) |
|----------------------|----|-----------------|--------|-----------------|-------|----------|---------------------------------|
| 9/10 | AA | 5,843,780 | 1/1996 | Thomson | | | |
| | AB | 6,280,718B1 | 1/1999 | Kaufman, et al. | | | |
| | AC | 6,200,806B1 | 6/1998 | Thomson | | | |
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OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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|------|----|---|
| 9/10 | AP | Pirity, M., et al., "Embryonic Stem Cells, Creating Transgenic Animals", <u>Methods in Cell Biology</u> , Academic Press, pages 279-293 |
| | AR | Shamblott, M. J., et al., (1998) "Derivation of pluripotent stem cells from cultured human primordial germ cells", <u>Proc. Natl. Acad. Sci.</u> , 95:13726-13731 |
| | AS | Svendsen, C. N., et al., (1999) "New prospects for human stem-cell therapy in the nervous system", <u>Trends in Neurosciences</u> , 22(8):357-364 |
| | AT | Thomson, J. A., et al., (1998) "Embryonic stem Cell Lines Derived From Human Blastocysts", <u>Science</u> , 282:1145-1147 |

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| EXAMINER <i>Joe Winters</i> | DATE CONSIDERED 2/28/04 |
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| | AC | WO96/22362 | 7/25/96 | PCT | | | | |
| | AD | WO98/43679 | 10/8/98 | PCT | | | | |
| | AE | WO97/32033 | 9/4/97 | PCT | | | | |

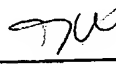
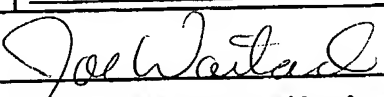
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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| | AF | Evans, M. J., et al., (1981) "Establishment in culture of pluripotential cells from mouse embryos", <u>Nature</u> 292:154-156; |
| | AG | Martin, G. R., (1981) "Isolation of a pluripotent cell line from early mouse embryos cultured in medium conditioned by teratocarcinoma stem cells", <u>Proc. Natl. Acad. Sci USA</u> 78(12):7634-7638; |
| | AH | Andrews, P. W., et al. (1984) "Pluripotent Embryonal Carcinoma Clones Derived from the Human Teratocarcinoma Cell Line Tera-2", <u>Lab. Invest.</u> 50(2):147-162; |
| | AI | Pera, M. F., et al. (1989) "Isolation and characterization of a multipotent clone of human embryonal carcinoma-cells", <u>Differentiation</u> 42:10-23; |
| | AJ | Thomson, J. A., et al. (1995) "Isolation of a primate embryonic stem cell line", <u>Proc. Natl. Acad. Sci USA</u> 92:7844-7848; |
| | AK | Thomson, J. A., et al. (1996) "Pluripotent Cell Lines Derived from Common Marmoset (<i>Callithrix jacchus</i>) Blastocysts", <u>Bio Reprod.</u> 55:254-259; |

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| OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
|  | AP | Bongso, A., et al. (1994) "Isolation and culture of inner cell mass cells from human blastocysts", <u>Hum. Reprod.</u> 9(11):2110-2117; | | | | | |
| | AQ | Andrews, P. W., et al. (1996) "Comparative analysis of cell surface antigens expressed by cell-lines derived from human germ cell tumours", <u>Int.J.Cancer</u> 66:806-816; | | | | | |
| | AR | Cooper, S., et al. (1992) "A novel keratan sulfate proteoglycan from a human embryonal carcinoma cell line", <u>Biochem.J.</u> 286:959-966; | | | | | |
| | AS | Pera, M. F., et al. (1988) "Analysis of cell-differentiation lineage in human teratomas using new monoclonal antibodies to cytostructural antigens of embryonal carcinoma cells", <u>Differentiation</u> 39:139-149; | | | | | |
| | AT | Fong, C. Y., et al. (1998) "Comparison of human blastulation rates and total cell number in sequential culture media with and without co-culture", <u>Hum. Reprod.</u> 14(3):774-781; | | | | | |
| | AU | Fong, C. Y., et al. (1997) "Ongoing normal pregnancy after transfer of zona-free blastocysts: implications for embryo transfer in the human", <u>Hum. Reprod.</u> 12(3):557-560; | | | | | |
| | AV | Solter, D., et al. (1975) "Immunosurgery of mouse blastocyst", <u>Proc. Natl Acad Sci USA</u> 72(12):5099-5102; | | | | | |
| EXAMINER  | | DATE CONSIDERED 7/28/04 | | | | | |
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| 96 | AA | Vajta, G., et al. (1998) "Open Pulled Straw (OPS) Vitrification: A New Way to Reduce Cryoinjuries of Bovine Ova and Embryos", <u>Molecular Reproduction and Development</u> 51:53-58; |
| | AB | Vajta, G., et al. (1998) "Sterile application of the opened pulled straw (OPS) vitrification method", <u>Cryo-letters</u> 19:389-392; |
| | AC | Kleinsmith, L. J., et al. (1964) "Multipotentiality of Single Embryonal Carcinoma Cells", <u>The University of Michigan</u> 24:1544-1551; |
| | AD | Stevens, L. C. (1983) "Testicular, ovarian, and embryo-derived teratomas", <u>Cancer Surveys</u> 2(1):75-91; |
| | AE | Martin, G. R. (1980) "Teratocarcinomas and Mammalian Embryogenesis", <u>Science</u> 209:768-776; |
| | AF | Matsui, Y., et al. (1992) "Derivation of Pluripotential Embryonic Stem Cells from Murine Primordial Germ Cells in Culture", <u>Cell</u> 70:841-847; |
| | AG | Thompson, S., et al. (1984) "Cloned human teratoma cells differentiate into neuron-like cells and other cell types in retinoic acid", <u>F. Cell Sci.</u> 72:37-64; |
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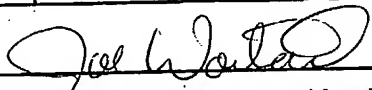
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OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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| 94 | AA | Odorico, J.S., et al., Stem Cells, "Multilineage Differentiation from Human Embryonic Stem Cell Lines", 2001; 19:193-204; |
| | AB | Cruz, Y.P., et al., Animal Applications of Research in Mammalian Development, "Origin of Embryonic and Extraembryonic Cell Lineages in Mammalian Embryos," pp. 147-204 |
| | AC | Thomson, J.A., et al., TIBTECH, "Human embryonic stem cell and embryonic germ cell lines," Feb. 2000, Vol. 18, pp. 53-57 |
| | AD | Nichols, J., et al., Development, "Establishment of germ-line-competent embryonic stem (ES) cells using differentiation inhibiting activity," 1990, 110, pp. 1341-1348 |
| | AE | Clark, A.J., et al., Transgenic Animals, "Germ line manipulation: applications in agriculture and biotechnology," pp. 249-250 |
| | AF | Piedrahita, J.A., et al., Theriogenology, "On the isolation of Embryonic Stem Cells: Comparative Behavior of Murine, Porcine and Ovine Embryos," Nov. 1990, Vol. 34, No. 5, pp. 879-901 |
| | AG | |

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